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EXAMINER	
CHOU, ANDREW Y	
ART UNIT	PAPER NUMBER
2192	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/713,649	SHAPIRO, MICHAEL W.	
	Examiner	Art Unit	
	ANDREW CHOU	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-3, 10, 11, and 17 have been amended. Claims 1-23 are pending.

Response to Arguments

2. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection. See Edwards et al. US 6,662,356 art made of record below.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Edwards et al. US 6,662,356 B1 (hereinafter Edwards).

Claim 1:

Edwards discloses a method of translating data, comprising:

obtaining a value of an implementation data structure from an instrumented program, wherein the implementation data structure is internal to the instrumented program (see for example column 7, lines 10-21, "…maintained in data structures…", the annotations are stored in implementation data structures which are obtained for the procedures during the transformation process and output by the output translator);

accessing a translator associated with the instrumented program, wherein the translator comprises a plurality of transformations (see for example FIG. 2A, item 210, "Input Translation (Reader)", and associated text); and

translating the value of the implementation data structure using the translator (see for example FIG. 2A, item 210, "Input Translation (Reader)", and associated text) to obtain translated data, wherein the translating comprises applying to at least one of the plurality of transformations to convert a representation of the implementation data structure into an interface data structure (see for example column 8, lines 36-50, see for example FIG. 2A, item 220, 240, 203, "IR", "Output translation", "EXE", where the immediate representation is converted, and associated text), wherein the interface data structure corresponds to an interface offered by the instrumented program;

wherein the translated data is configured to satisfy an instrumentation request from a user (see for example column 8, lines 36-50).

Claim 2:

Edwards further discloses the method of claim 1, further comprising:

executing a tracing program to enable a probe in the instrumented program based on the instrumentation request (see for example column 9, lines 25-37, "…inserting probe code…");

triggering the probe in the instrumented program (see for example column 9, lines 25-37, "…inserting probe code…"); and

transferring translated data from the translator to an execution framework, wherein the execution framework comprises a tracing framework (see for example FIG. 2B, and associated text).

Claim 3:

Edwards further discloses the method of claim 1, further comprising:

executing a debugging program in the instrumented program in response to an instrumentation request (see for example TABLE 2, "returns debugging information");

and

transferring translated data to an execution framework in response to the instrumentation request, wherein the execution framework comprises a debugger (see for example column 7, lines 29-44).

Claim 4:

Edwards further discloses the method of claim 1, wherein the translator is defined using a high-level programming language (see for example column 1, lines 35-49).

Claim 5:

Edwards further discloses the method of claim 1, wherein the translator is updated independently of the execution framework (see for example column 7, lines 59-66).

Claim 6:

Edwards further discloses the method of claim 1, further comprising:

delivering the translator using an encoded delivery (see for example FIG. 2A, item 210, and related text).

Claim 7:

Edwards further discloses the method of claim 1, further comprising:

delivering the translator using a compiled delivery (see for example FIG. 2A, item 210, and related text).

Claim 8:

Edwards further discloses the method of claim 1, further comprising: selecting the translator using an instrumentation request (see for example FIG. 2A, item 210, and related text).

Claim 9:

Edwards further discloses the method of claim 1, further comprising: selecting the translator using knowledge of a function argument type of the instrumented program (see for example FIG. 2A, item 210, and related text).

Claim 10:

Edwards discloses a system (see for example FIG. 1, and related text) for translating data, comprising:

a memory configured to (see for example FIG. 1, item 22, “System Memory”, and associated text):

store an instrumented program comprising at least one implementation data structure, Wherein the implementation data structure is internal to the instrumented program (see for example column 7, lines 10-21);

store a translator comprising a plurality of transformations (see for example FIG. 2A, item 210, and related text);

a processor (see for example FIG. 1, item 21, and associated text) configured to:

execute a compiler arranged to compile the plurality of transformations into the translator (see for example column 17, “origAddr(component)”); and

execute an execution framework configured to use the translator to convert at least one implementation data structure into an interface data structure to obtain translated data, wherein the interface data structure corresponds to an interface offered by the instrumented program, and wherein the translated data is configured to satisfy the instrumentation request from a user see for example column 7, lines 10-21);

Claim 11:

Edwards further discloses the system of claim 10, wherein the instrumentation request explicitly translates the value of the at least one implementation data structure into the translated data (see for example FIG. 2A, items 210, 220, 240, and related text).

Claim 12:

Edwards further discloses the system of claim 10, wherein a function call implicitly triggers the translating the value of the at least one implementation data structure into

the translated data (see for example FIG. 2A, items 210, 220, 240, and related text).

Claim 13:

Edwards further discloses the system of claim 10, wherein the translator is defined using a high-level programming language (see for example column 1, lines 35-49).

Claim 14:

Edwards further discloses the system of claim 10, wherein the translator is updated independently of the execution framework (see for example column 7, lines 59-66).

Claim 15:

Edwards further discloses the system of claim 10, wherein the translator is delivered using at least one selected from the group consisting of encoded delivery and compiled delivery (see for example FIG. 2A, item 210, and related text).

Claim 16:

Edwards further discloses the system of claim 10, wherein the execution framework comprises at least one selected from the group consisting of a tracing framework and a debugger (see for example FIG. 2A, item 203, "EXE", and related text).

Claim 17:

Edwards discloses a computer system for translating data, comprising: a processor (see for example FIG. 1, item 21, and related text); a memory (see for example FIG. 1, item 22, and related text);

a storage device (see for example FIG. 1, item 32, and related text); and software instructions stored in the memory for enabling the computer system to: obtain a value of an implementation data structure from an instrumented program (see for example

column 7, lines 46-59); access a translator associated with the instrumented program, wherein the translator comprises a plurality of transformations (see for example FIG. 2A, item 210, "input translation", and related text); and translate the value of the implementation data structure using the translator to obtain translated data, wherein the translating comprises applying the plurality of
transformations to convert a representation" of the implementation data structure into an interface data structure (see for example FIG. 2A, items 210, 220, 240, and related text)..

Claim 18:

Edwards further discloses the computer system of claim 17, wherein the translator is defined using a high- level, programming language (see for example column 1, lines 35-49).

Claim 19:

Edwards further discloses the computer system of claim 17, wherein the translator is updated independently of the execution framework (see for example column 13, lines 10-24).

Claim 20:

Edwards further discloses the computer system of claim 17, further comprising software instructions to deliver the translator using an encoded delivery (see for example FIG. 2A, item 210, "input translation", and related text).

Claim 21:

Edwards further discloses the computer system of claim 17, further comprising software instructions to deliver the translator using a compiled delivery (see for example column 12, lines 60-68).

Claim 22:

Edwards further discloses the computer system of claim 17, further comprising software instructions to select the translator using the instrumentation request (see for example FIG. 4A, and related text).

Claim 23:

Edwards further discloses the computer system of claim 17, further comprising software instructions to select the translator using knowledge of a function argument type of the instrumented program (see for example FIG. 4A, and related text).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Y. Chou whose telephone number is (571) 272-6829. The examiner can normally be reached on Monday-Friday, 8:00 am - 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached on (571) 272-3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair- direct.uspto.,qov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free)

/Andrew Chou/

Examiner, Art Unit 2192

/Tuan Q. Dam/

Supervisory Patent Examiner, Art Unit 2192